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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/045,567	10/19/2001	Michael J. Ryan	35683.0new	1827

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EXAMINER

DAVIS, ROBERT B

ART UNIT

PAPER NUMBER

1722

DATE MAILED: 05/25/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/045,567

Applicant(s)

RYAN ET AL.

Examiner

Robert B. Davis

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 10 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 19-22 is/are allowed.
- 6) ☒ Claim(s) 1,2,4,6,11-17,23 and 24 is/are rejected.
- 7) ☒ Claim(s) 3, 5, 7-10 and 18 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Allowable Subject Matter*

1. The indicated allowability of claims 17, 23 and 24 (original claims 2, 11 and 12) is withdrawn in view of the newly discovered reference(s) to Uhlig. Rejections based on the newly cited reference(s) follow.

### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 2, 4, 6, 11-13, 15, 17, 23 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Uhlig (4,087,227: figures 1, 2, 5-7, 17 and 18; column 4, lines 49-64; column 5, line 64 to column 6, line 15; column 7, lines 13-29; column 7, line 63 to column 8, line 8 and column 13, lines 42-55) taken together with Inglesby (3,097,398: figures 1-3; column 1, lines 35-43; column 3, line 67 to column 4, line 20).

Uhlig discloses a blow mold assembly comprising: mold cavity shells (sets 20, 23; 54, 59; 188, 191) formed of electroformed nickel (column 5, lines 63-68); the cavity shells having a cavity portion including a front face (56), a rear face (57) and peripheral edge portions (58), the front face defining a cavity (60) in the shape of the product to be molded; the mold cavity shell also having coplanar, peripheral side portions (58, 58) adapted to mate with corresponding surfaces of a mating mold shell; a mold holder (53) located rearwardly of the mold; and the mold holder defining an outer wall (55) spaced

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from the entire rear face of the mold cavity portion to define a heat transfer passage between the inner wall and the cavity portion. In regards to claim 2, the mold of figure 17 has inserts (201, 202) for reducing the heat transfer passage to increase the velocity of the fluid in the heat transfer passages (189, 192) adjacent the portion of the cavity forming the neck of the bottle. In regards to claim 3, the mold of figure 6 has a structural reinforcement rib (61) and the mold of figure 1 has multiple ribs (39 and 40). In regards to claim 6, the mold in figures 5 and 6 has a mold holder (52) having peripheral line portions located outwardly of the mold cavity shell (54) peripheral side portions (58). In regards to claim 15, the mold of figure 1 includes mold holder heat transfer passages attached to conduits (25, 26, 27, 28). Uhlig does not disclose means for releasably connecting the mold holder to the peripheral side portions.

Inglesby discloses a blow molding apparatus comprising a mold having a shell (28) attached to mold holder (16) by means of fastening bolts (column 1, lines 35-43) which attach flange portions (24) of the mold shell to the mold holder flange (20) having openings (22) for fastening bolts. Note that the reference calls the holder (16) as a shell and the shell (28) as a casting. The reference discloses the benefits of using a mold shell and holder in terms of reduced weight and the ease in which the molding line can be changed to produce products of different size and shape by merely removing the mold shells from the mold holder while the entire assembly remains in place on the machine whereas traditional solid molds require removal of the complete unit and replacement by another complete unit (column 3, line 67 to column 4, line 20).

It would have been obvious at the time of the invention to one of ordinary skill in the art to modify the apparatus of Uhlig by using means for releasably connecting the mold holder to the peripheral side portions (bolts and bolt holes) as disclosed by Inglesby for the purpose of allowing relatively simple mold cavity replacement by merely replacing the mold cavity shells to form products of different size and/or shape while the remainder of the mold assembly remains on the mold apparatus.

4. Claims 14 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Uhlig taken together with Inglesby as applied to claims 1, 2, 4, 6, 11-13, 15, 17, 23 and 24 above, and further in view of Miller (5,766,299: figures 1 and 2; and column 5, lines 22-61).

The combination of Uhlig and Inglesby discloses all claimed features except for the opposing mold shells mating with a third mold piece for forming the molding cavity and the mold holder being made of aluminum.

Miller discloses a third mold member (48) for forming the base of the article and the mold holder (38) being made of aluminum.

It would have been obvious at the time of the invention to one of ordinary skill in the art to modify the apparatus of Uhlig by using a third mold to form the bottom of the molded article as disclosed by Miller as well known in the art for forming an undercut article which would be difficult to remove from a two-piece mold. It would have been further obvious to modify Uhlig by using an aluminum mold holder as disclosed by Miller for the purpose of forming a composite mold having a holder formed of a suitable material for structural rigidity.

***Allowable Subject Matter***

5. Claims 19-22 are allowed over the prior art of record.
6. Claims 3, 5, 7-10 and 18 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Response to Arguments***

7. Applicant's arguments with respect to claims 1, 2, 4, 6, 11-17, 23 and 24 have been considered but are moot in view of the new ground(s) of rejection.

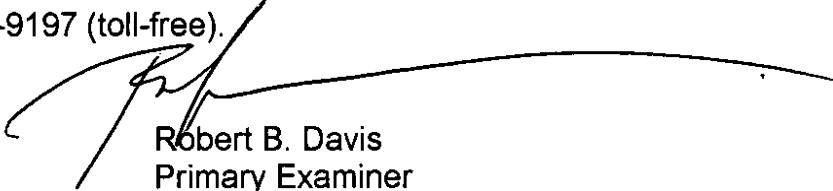
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert B. Davis whose telephone number is 571-272-1129. The examiner can normally be reached on Monday-Friday 9-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wanda L. Walker can be reached on 571-272-1151. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic

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Business Center (EBC) at 866-217-9197 (toll-free).



Robert B. Davis  
Primary Examiner  
Art Unit 1722

5/21/07